



User Manual

Wi-Fi Audio Extender

DCH-M225

Preface

D-Link reserves the right to revise this publication and to make changes in the content hereof without obligation to notify any person or organization of such revisions or changes.

Manual Revisions

Revision	Date	Description
1.0	June 11, 2014	• Initial release for Revision A1

Trademarks

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Package Contents



DCH-M225 Wi-Fi Audio Extender



Wi-Fi Configuration Card



Quick Install Guide

If any of the above items are missing, please contact your reseller.

Minimum Requirements

Network Requirements	<ul style="list-style-type: none">• IEEE 802.11n or 802.11g wireless clients/devices• A wireless router with an active Internet connection
Web-based Configuration Utility Requirements	<p>Computer with the following:</p> <ul style="list-style-type: none">• Windows®, Macintosh, Android or Linux-based operating system• Wireless adapter or Wi-Fi functionality <p>Browser Requirements:</p> <ul style="list-style-type: none">• Internet Explorer® 7 or higher• Safari® 4 or higher• Firefox® 12 or higher• Chrome™ 20 or higher <p>Windows Users: Make sure you have the latest version of Java installed. Visit www.java.com to download the latest version.</p>

Introduction

The Wi-Fi Audio Extender (DCH-M225) is a portable plug-in repeater that lets you extend your existing wireless network. It also expands your audio capabilities by allowing you to stream your music library to anywhere within your extended wireless network.

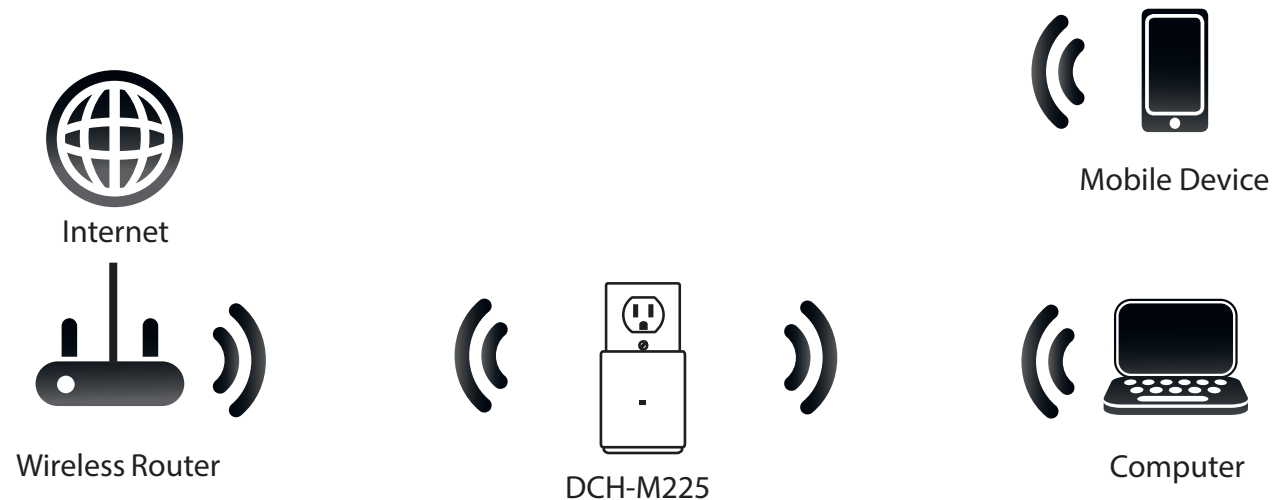
Just place the extender within equal distance of your wireless router and your wireless client devices. This will extend your wireless coverage to hard-to-reach places like basements, home offices or upstairs bedrooms that are distant from your wireless router. The Wi-Fi Audio Extender is also ideal for mobile device connections. Tiny yet powerful, it supports Wireless N speeds up to 300 Mbps.

* Maximum wireless signal rate derived from IEEE Standard , 802.11g and 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

What is a Wi-Fi Extender?

The DCH-M225 extends the range of an existing wireless network to provide a better signal for parts of your home or office that may have poor or no reception. Your existing wireless signal will be rebroadcast by the extender, allowing you to reach the farthest corners of your home or office. The extended network can simply use the same network credentials as the existing network, or you can specify a different network name and password, giving you the flexibility to control network access.

Note: The DCH-M225 is intended to provide a constant network connection. Needless to say, it does not have a standby mode. To power down this unit, simply unplug it from the power outlet.



Features

- **Conveniently Stream Audio** - The DCH-M225 will expand your audio capabilities. You can simply plug in your DLNA Certified® speakers and you'll be able to stream audio to anywhere within your extended wireless network. The Wi-Fi WMM QoS (Quality of service) protocol ensures that you'll have no issues with bandwidth when streaming audio and performing other tasks, such as surfing the Internet or checking your e-mail.
- **Extend Your Existing Network** - The DCH-M225 lets you extend your existing wireless network. It also allows you to extend your internet access throughout your home with devices such as laptops, smartphones, and tablets.
- **Compact, Convenient Design** - The DCH-M225's compact design is ideal for use at home or at a small office, since it does not take up much space. It can easily be plugged into a power outlet without blocking other outlets.

* Maximum wireless signal rate derived from IEEE Standard 802.11g and 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

Hardware Overview

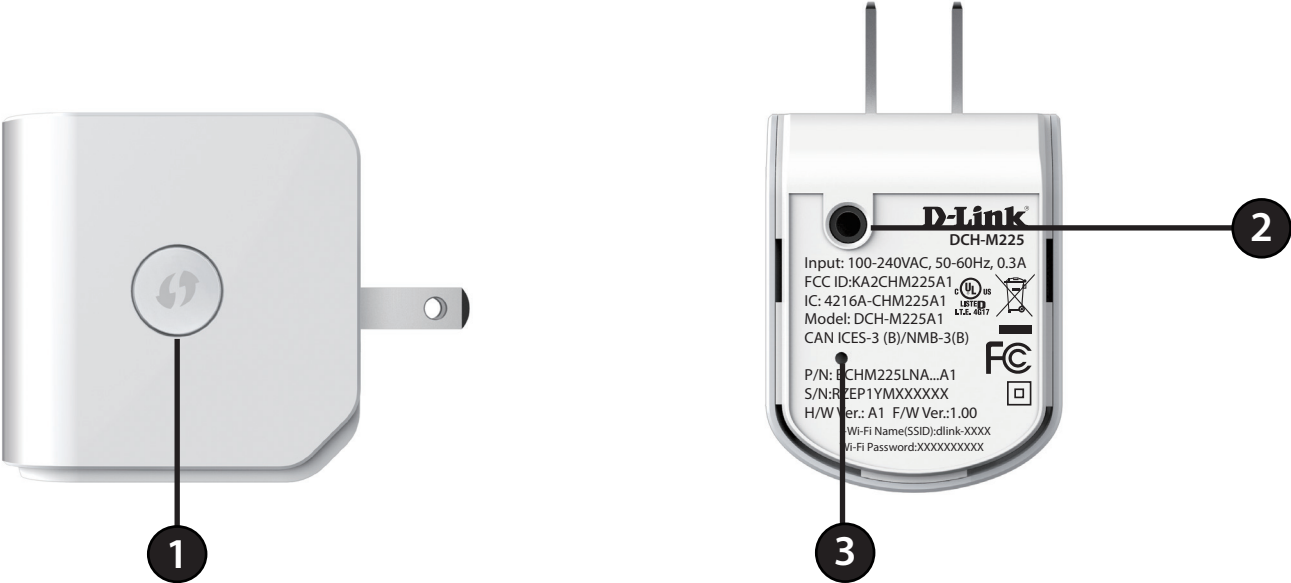
Front/LED Indicator



LED Indicator	Color	Status	Description
Power/Status	Green	Solid Green	The device is successfully connected to a wireless router or AP.
		Blinking Green	The device is processing a connection after the WPS button has been pushed.
	Red	Solid Red	The device is booting up.
		Blinking Red	The device is in recovery mode or it has malfunctioned.
	Amber	Blinking Amber	The device cannot connect to a wireless router or access point.
	None	Off	The device is not receiving power. Try a different power outlet.

Hardware Overview

Side and Bottom/WPS and Reset



1	WPS Button	Press the WPS (Wi-Fi Protected Setup) button for a minimum of one second to automatically connect with Wi-Fi clients. The LED on the front of the device turns solid green, when the DCH-M225 has successfully connected.
2	Audio Line Out	Connect an external speaker to the audio line out jack*.
3	Reset Button	Press and hold the reset button for six seconds to reset the DCS-M225 to the factory default settings.

*You may use an Airplay®, iTunes, or any DLNA-enabled device that is connected to your extended network to play music to the speakers you connect to the DCH-M225.

For Apple Airplay:

- a. Open **iTunes** (or the Airplay music app* on your iOS device)
- b. Click the **Airplay** icon.
- c. Select the **DCH-M225** from the destination list.
- d. Click **Play** and the music will stream to the extender.

For DLNA:

- a. Download and install a **DLNA** music app.
- b. Verify that DLNA is enabled on your device. Refer to [“Audio Renderer” on page 26](#).
- c. Within the app, select the **DCH-M225** from the *Play to* or the destination list.
- d. Click **Play** and the music will stream to the extender.

Product Setup

There are several different ways you can set up your DCH-M225:

- **WPS** - Use Wi-Fi Protected Setup to connect to your router and wireless clients. Refer to [“Connect Your DCH-M225 to Your Router Using WPS” on page 11](#).
- **QRS Mobile app** - Use your smartphone or tablet to configure your audio extender. Refer to [“QRS Mobile App Setup” on page 13](#).
- **D-Link Setup Wizard** - Log into the web-based configuration utility and launch the Setup Wizard. Refer to [“Setup Wizard” on page 19](#).
- **Manual Setup** - Configure your DCH-M225 using a web browser. Refer to [“Manual Configuration” on page 22](#).

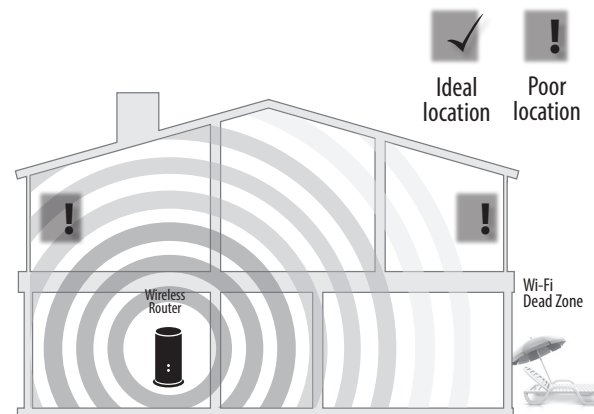
Wireless Installation Considerations

The D-Link wireless device lets you access your network using a wireless connection from virtually anywhere within the operating range of your wireless network. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

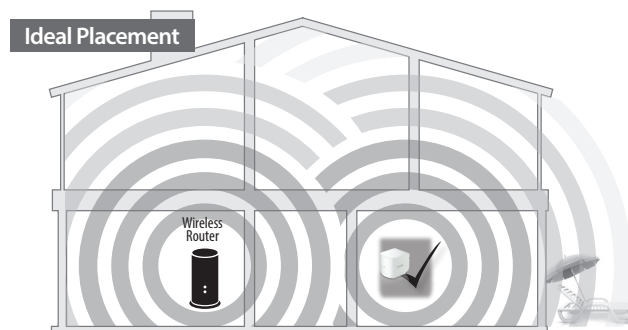
1. Keep the number of walls and ceilings between the D-Link device and other network devices to a minimum. Each wall or ceiling can reduce your extender's range by up to 90 feet (more than 27 meters). Position your devices so that the number of walls or ceilings is minimized.
2. Be aware of the direct line between network devices. At a 45-degree angle, a wall that is 1.5 feet thick (0.5 meters), appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it can appear to be over 45 feet (almost 14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
3. Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position access points, wireless routers, and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete can degrade your wireless signal.
4. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.
5. If you are using 2.4GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone is not in use.

Recommended Placement

A range extender only works as well as the signal it is extending. Therefore, proper placement of your DCH-M225 is important in achieving desired results.



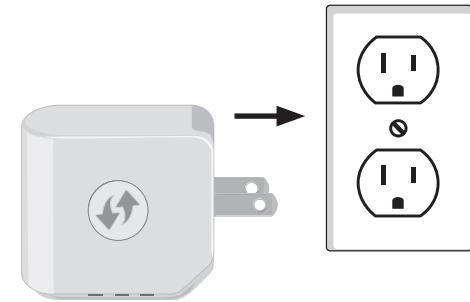
For best performance, place your DCH-M225 in between your router and your dead zone, making sure it's placed in a location where the signal is still strong.



Connect Your DCH-M225 to Your Router Using WPS

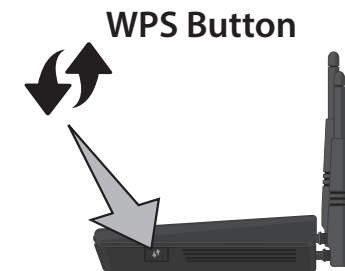
The easiest and most secure way to connect your DCH-M225 to your the router or access point is with WPS (Wi-Fi Protected Setup). Refer to your user manual for your router or access point to make sure you understand how to enable WPS. Once you know, follow the steps below:

Step 1 - Find an available outlet near your wireless router. Plug in the DCH-M225, and wait until the LED starts blinking amber.

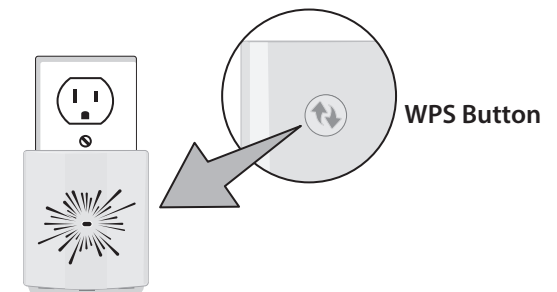


Step 2 - Press the **WPS** button on your wireless router.

Note: Usually the WPS LED will blink once it is pressed. Check your router's user manual for more information.



Step 3 - Within one minute, press and hold the **WPS** button on the DCH-M225 until the LED starts blinking green and then release. Allow up to two minutes for the WPS process to complete.



Step 4 - When the LED turns solid green, this indicates the DCH-M225 is securely connected to your wireless router or access point.

Note: If your devices are not connected, try moving the DCH-M225 closer to your wireless router or access point, and repeat steps 2 and 3 to connect.

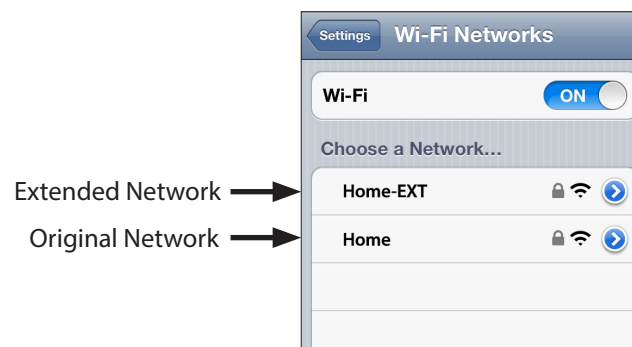
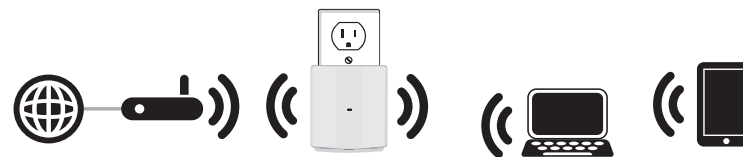
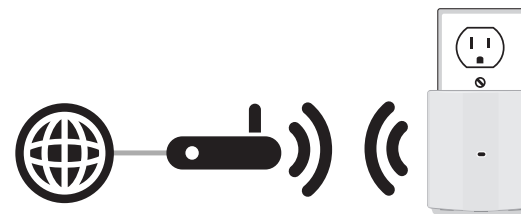
Step 5 - Once connected to your router, you can unplug and move the DCH-M225 to a location between your wireless router and the area that you need to extend wireless coverage to.

Step 6 - Next you can connect the DCH-M225 to your wireless clients. Use your wireless device to go to the wireless utility to scan for available wireless networks.

- Select the **SSID** for the DCH-M225. It will automatically be: (Your router's SSID)-EXT
- Enter the **Wi-Fi Password** for the DCH-M225. It will be: The same as the Wi-Fi password for your router

Note: If you want to change your **Wi-Fi Network Name (SSID)** and **Wi-Fi Password** refer to ["Extended Wi-Fi Settings" on page 25.](#)

If you would like to connect additional devices, repeat step 6. You also have the option to use WPS (Wi-Fi Protected Setup) to connect wireless devices. Refer to ["Connecting to Wireless Clients Using WPS" on page 36.](#)



QRS Mobile App Setup

The DCH-M225 can be set up from your iOS or Android smartphone or tablet using the *QRS Mobile* app.

Search for *QRS Mobile* in the App Store or Google Play, or use your mobile device to scan the **QR codes** on the right to download the *QRS Mobile* app from the App Store (left) for your iOS device, or from Google Play (right) for your Android device.



For iOS

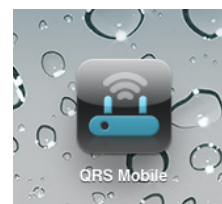


For Android

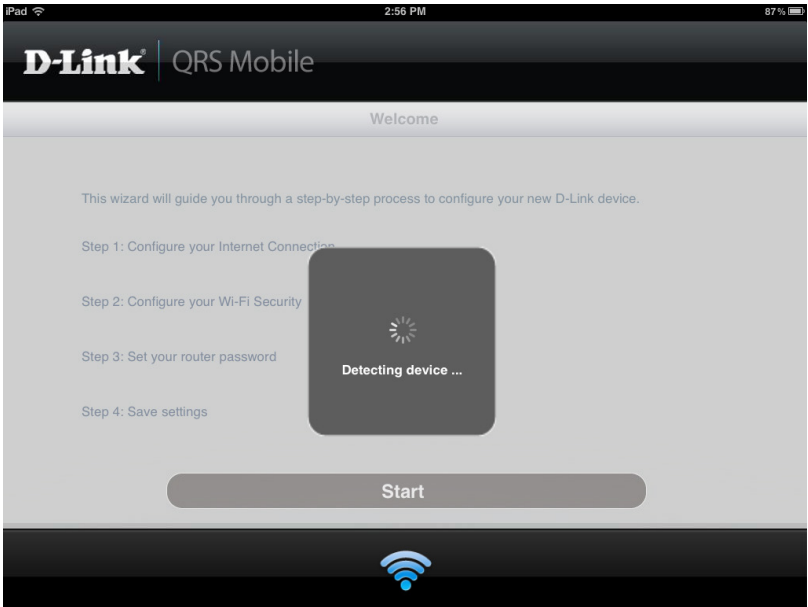
Connect to the **Wi-Fi Network** that is displayed on the *Wi-Fi Configuration Card* included in your package (ex: **dlink-2c19**). Then, enter the **Wi-Fi Password** also printed on the *Wi-Fi Configuration Card* (ex: **gccnu80856**).

D-Link Wi-Fi Configuration Card	
Default Configuration	Your configuration
Wi-Fi Name(SSID): dlink-2c19	Username: "Admin"
Wi-Fi Password: gccnu80856	Password: <input type="password"/>
Web browser link: http://dlinkap2c19.local	Wi-Fi Name(SSID) <input type="text"/>
	Wi-Fi Password: <input type="password"/>
Username: "Admin"	
Password: " "(leave the field blank)	

Once your mobile device is connected, tap on the **QRS Mobile** icon.



Tap **Start** to continue.



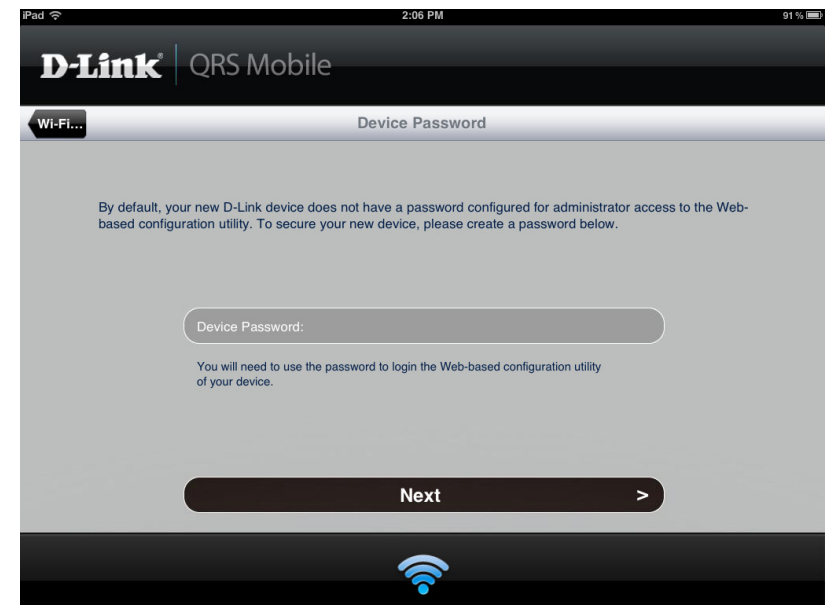
QRS Mobile will first detect your DCH-M225, then scan for available Wi-Fi networks. Select the **Wireless Network** you wish to extend and enter the **Password** if required.



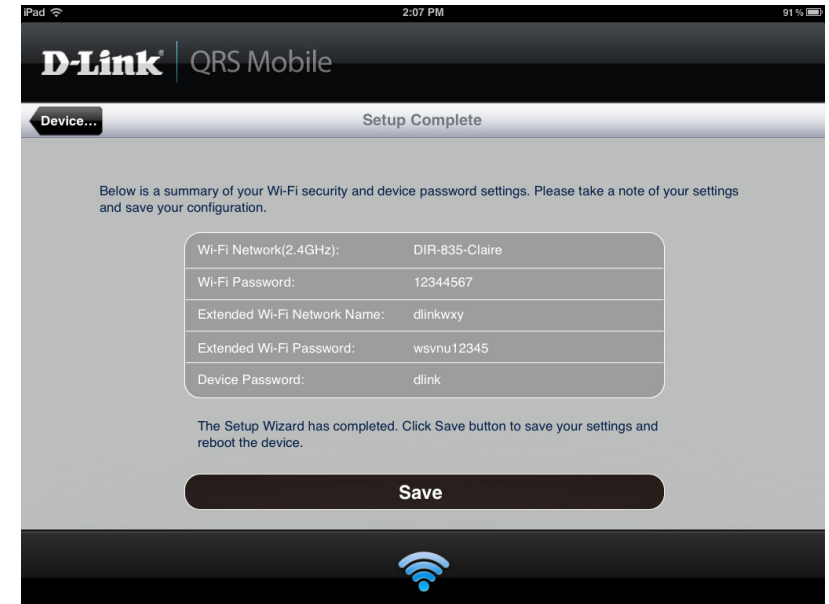
Setup your extended Wi-Fi network. You may enter a **Network Name** and **Password**. Or, tap to check the box if you would like to keep the existing SSID and password for the extended network. Tap **Next** to continue.



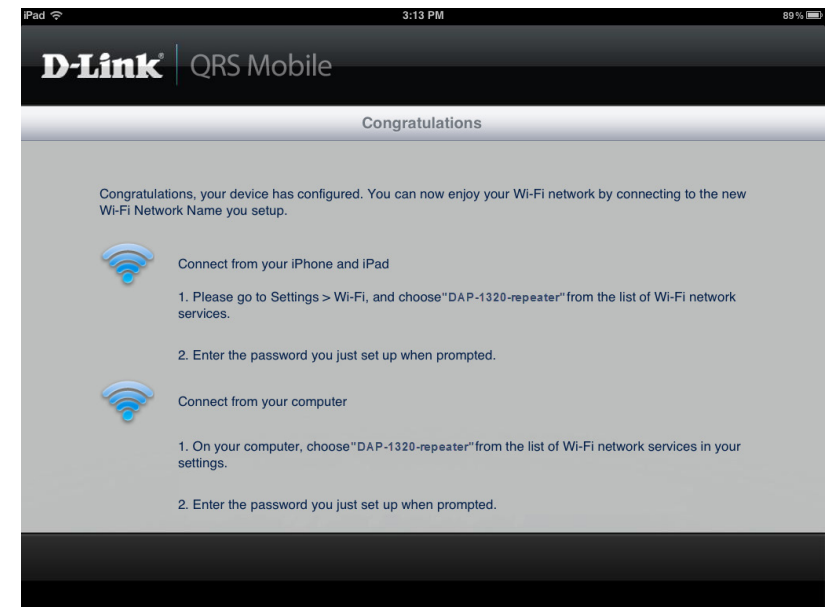
By default, your DCH-M225 does not have an admin password for the Web-based configuration utility. To secure your device, you can enter a **Password**. Tap **Next** to continue.



A summary of your settings will be displayed. To complete the setup, tap **Save** to save your settings and reboot the device.



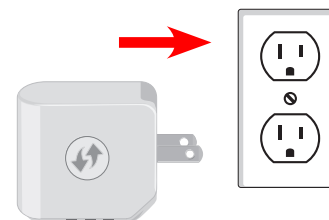
After configuration is complete, the following screen will appear. You can follow the on-screen instructions to change your mobile device and laptop Wi-Fi settings to the wireless **Network Name** and **Password** you just created.



Web-based Configuration Utility

Use the web-based configuration utility to launch the Setup Wizard and/or to change wireless and network settings.

1. Plug the DCH-M225 into an available outlet near your router. You can move it to a more suitable location after configuration.



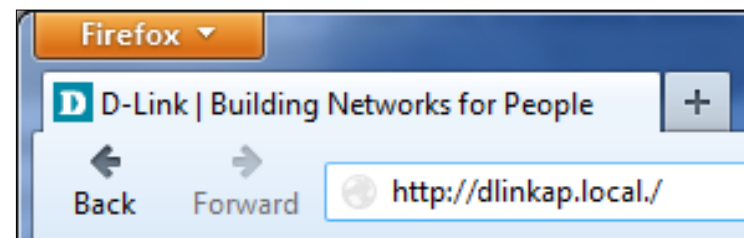
2. Open the wireless utility on your wireless device or computer. Select the **Wi-Fi Network Name** and enter the **Wi-Fi Password** from your *Wi-Fi Configuration Card*.



D-Link Wi-Fi Configuration Card	
Default Configuration	Your configuration
Wi-Fi Name(SSID): dlink-2c19	Username: "Admin"
Wi-Fi Password: gccnu80856	Password:
Web browser link: http://dlinkap2c19.local.	Wi-Fi Name(SSID):
	Wi-Fi Password:
Username: "Admin"	
Password: " (leave the field blank)	

3. Then open a web-browser (e.g., Internet Explorer, Chrome, Firefox, or Safari) and enter **http://dlinkap.local./**. Or, you can enter the default IP address of the DCH-M225, which is **192.168.0.50***.

If you have multiple DCH-M225 devices on the network, you can access the web-based configuration utility using the following: **http://dlinkapxxxx.local./**, where xxxx is the last four digits of the DCH-M225's MAC address.



*Once the DCH-M225 connects to your router using the default IP address, it will be assigned a new IP address based on your router/network's DHCP settings. You will need to log in to your router and view the DHCP table to see what IP address was assigned to the DCH-M225. The MAC address is printed on the label on the DCH-M225.

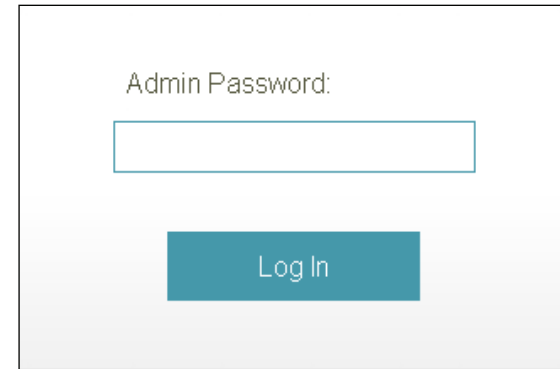
- Once you connect, simply click **Log In**. (The *Admin Password* is blank by default.)

Note: If this is your first time you logging in, you will automatically be directed to the Setup Wizard. Skip to the next page for instructions.

- The configuration interface will open to the *Home* page. If you see the yellow warning icon, it means there is not yet a connection or there is a connection error.

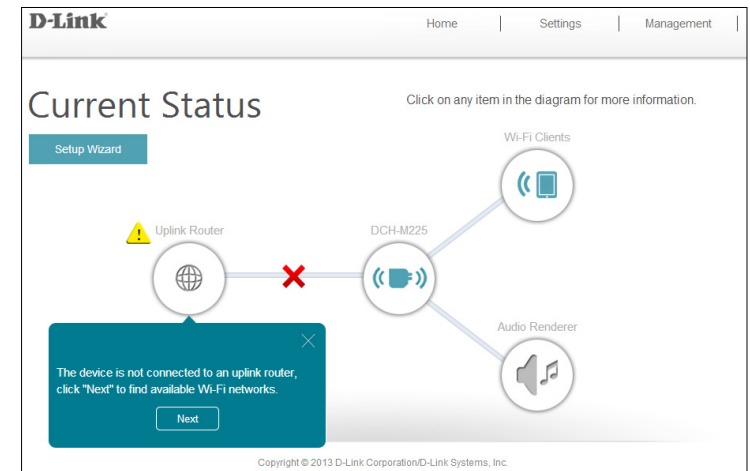
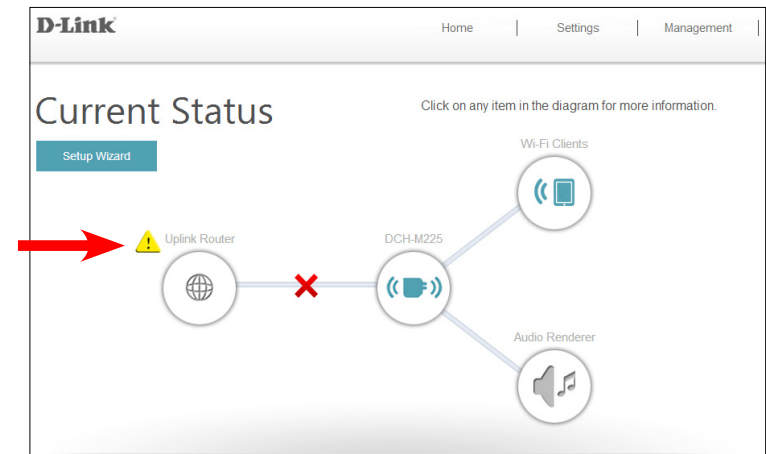
To establish a connection, you can click on **Uplink Router** and search for available Wi-Fi networks.

Or, click **Setup Wizard** and proceed to “[Setup Wizard](#)” on page 19 for step-by-step instructions for connecting to your router and configuring your Wi-Fi Audio Extender.



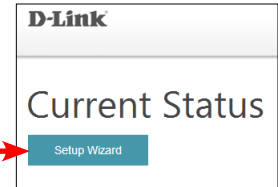
Admin Password:

Log In

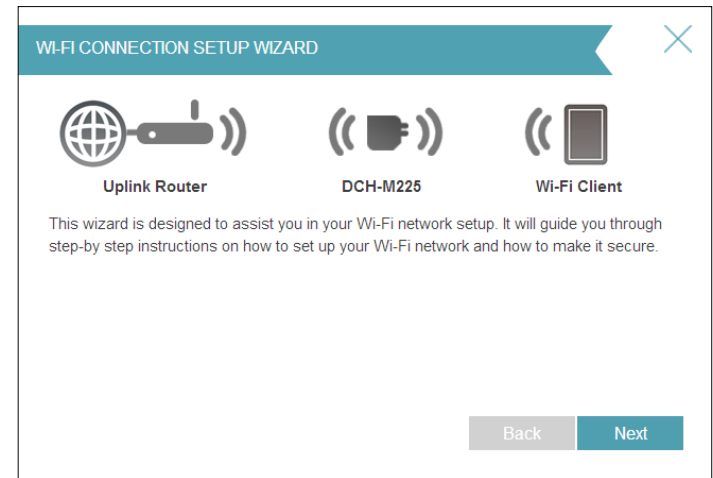


Setup Wizard

Use the *Setup Wizard* to guide you through the process of configuring your DCH-M225. From the *Home* page, click on **Setup Wizard**. (If you already have a Wi-Fi network set up and you want to configure your W-Fi Network settings manually, refer to ["Wi-Fi Settings" on page 24.](#))



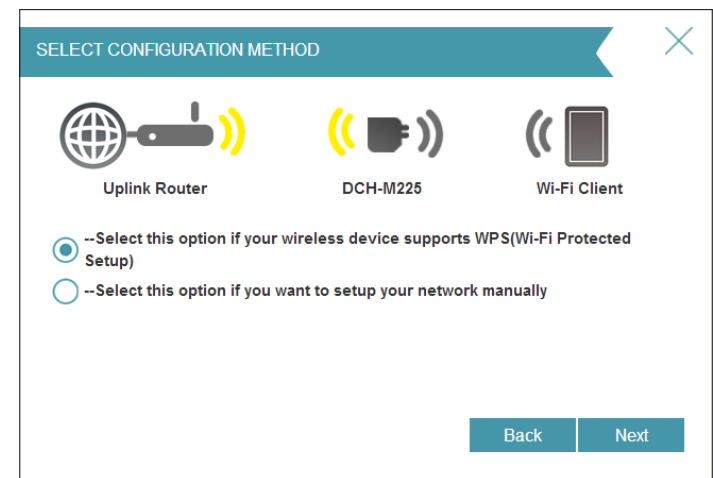
1. The Setup Wizard will assist you with connecting to your router and configuring your Wi-Fi Audio Extender. Click **Next** to continue.



2. If your wireless device supports WPS, click on **Select this option if your wireless device supports WPS (Wi-Fi Protected Setup)**. You will be prompted to press the WPS button on your router or access point. Follow the instructions for WPS in Step 3.

If your wireless device does not support WPS, skip to Step 4 on the next page .

Click **Next** to continue.



3. The DCH-M225 uses the push-button method for WPS. Press and hold the **WPS** button on your wireless router or access point until the light starts blinking green. Allow up to two minutes for the WPS process to finish. When a connection is successfully established, the LED on the device should turn solid green.

Note: Refer to your router or access point's user manual instructions for more information about the WPS process.

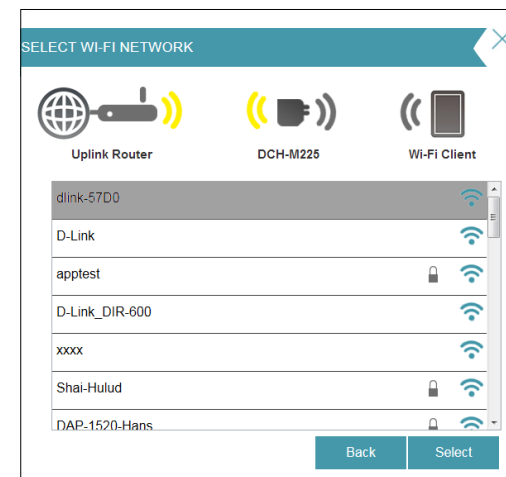
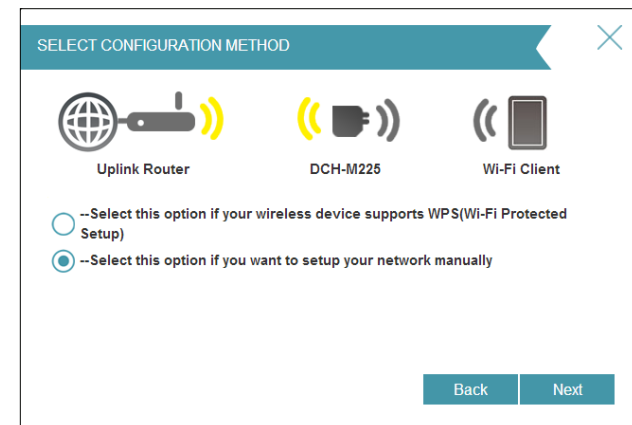
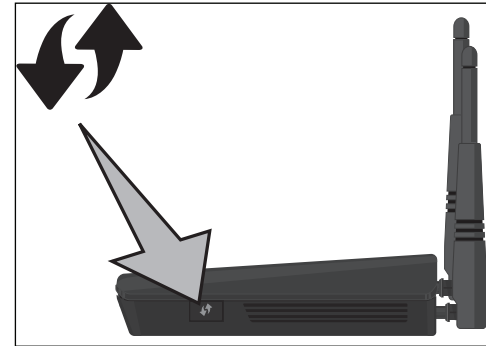
4. If your wireless device does not support WPS, click **Select this option if you want to set up your network manually.**

Click **Next** to continue.

5. Wait while your DCH-M225 scans for available Wi-Fi networks. You will see a list of networks found. Select the **Wi-Fi Network** you wish to use, click **Select**.

Note: If the network you would like to connect to isn't listed, click **Back** and select the manual option again to perform another scan. Make sure you are in range of your wireless router.

WPS Button



- If the wireless network you selected is secure, you will be prompted to enter the **Wi-Fi Password**.

Click **Next** to continue.

- The DCH-M225 will rebroadcast the Wi-Fi connection from the uplink router as an *Extended Network*. Enter an **Extended Wi-Fi network name** and **Extended Wi-Fi network password**.

If you would like to use the same SSID and password as your uplink router, check the box at the bottom of the screen. This will extend the network that your router is currently broadcasting.

Click **Next** to continue.

- The setup process is now complete. A summary page will appear displaying the settings for both the connection to the *Wi-Fi Network* and the *Extended Wi-Fi network*. It is recommended that you make a note of this information for future reference.

Click **Save** to save your settings and exit the wizard.

Manual Configuration

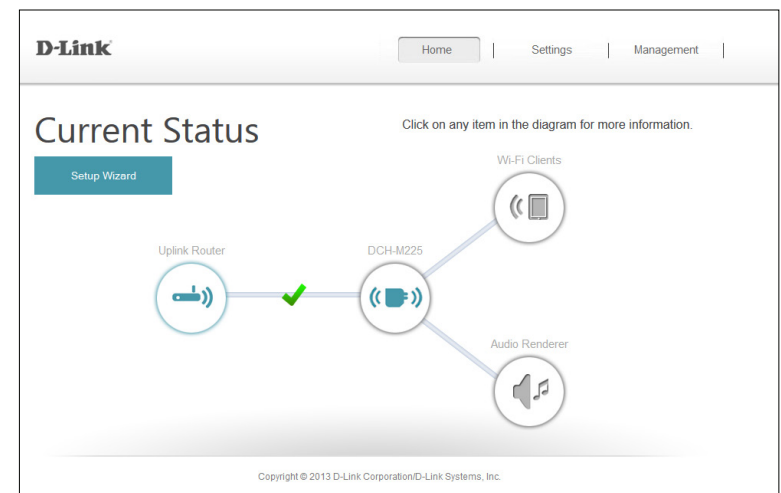
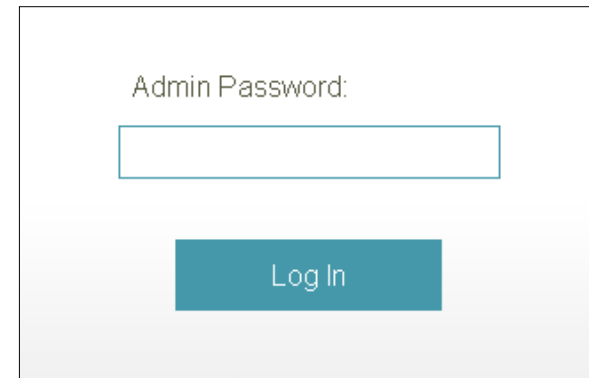
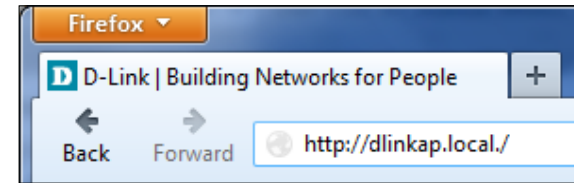
Open a web-browser (e.g., Internet Explorer, Chrome, Firefox, or Safari) and enter **http://dlinkap.local./**. Or, you can enter the default IP address of the DCH-M225, which is **192.168.0.50**.

Note: Once the DCH-M225 connects to your router using the default IP address, it will be assigned a new IP address based on your router/network's DHCP settings. You will need to log in to your router and view the DHCP table to see what IP address was assigned to the DCH-M225. The MAC address is printed on the label on the DCH-M225.

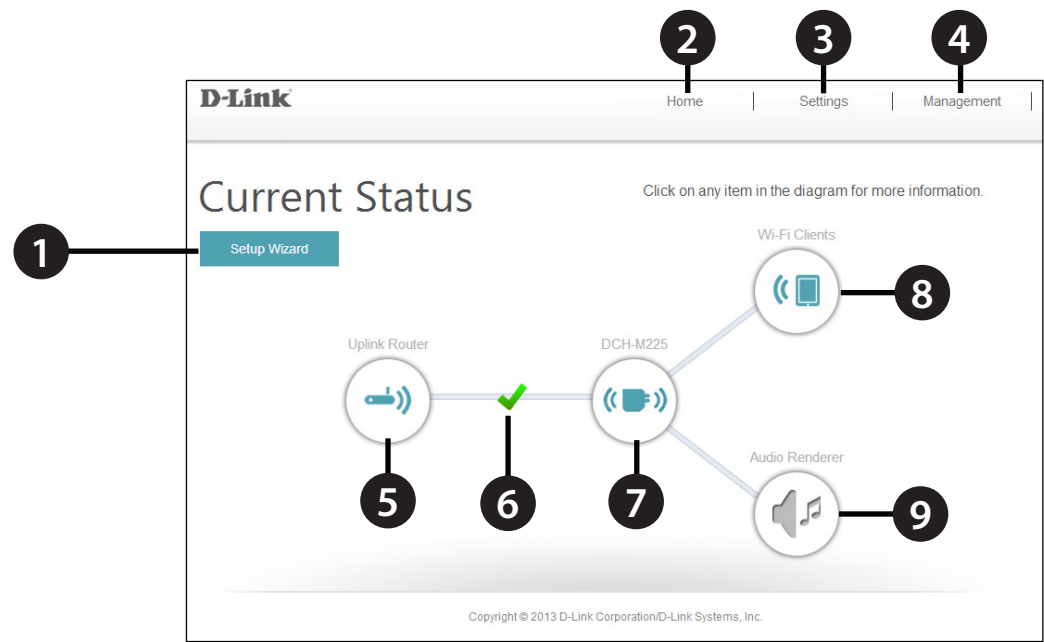
Enter your **Admin Password**. If you did not create a password during the Setup Wizard, leave the *Admin Password* field blank by default. Click **Log In** to proceed.

The *Home* screen displays current connection status for devices connected to the DCH-M225. You can click on a device image to view the current status of the device.

A detailed description of the *Home* screen is on the next page. The bar at the top of the *Home* page provides quick access to the *Settings* and *Management* functions.



Home



1	Setup Wizard	Click to launch the setup wizard. Refer to “Setup Wizard” on page 19 .
2	Home	Click to navigate to the <i>Current Status</i> page (as shown above).
3	Settings	Click to change/view your Wi-Fi, Extended Wi-Fi, and network settings.
4	Management	Click to change the login password, upgrade firmware, view data traffic statistics, save/load configuration files, reboot, and restore the DCH-M225 back to the factory default settings.
5	Uplink Router	Click to display the network settings of the wireless network (if connected) or to connect to a network if not connected.
6	Uplink Router Status	Displays the status of your connection to the wireless network you are extending. A green check mark (✓) indicates a successful connection to your wireless router or access point. A red (✗) indicates there is no connection, or there is a connection error. Click the Uplink Router icon to display a list of wireless networks you can connect the DCH-M225 to.
7	DCH-M225	Click to view the details of both the uplink router network and the extended Wi-Fi network.
8	Wi-Fi Clients	Click to display a list of clients (devices) currently connected to the DCH-M225.
9	Audio Renderer	Click to view the details about the Audio Renderer.

Wi-Fi Settings

This page lets you configure the Wi-Fi Network you would like your DCH-M225 to connect to. Use Site Survey to scan available Wi-Fi networks so you can select the one you would like to extend. To access this page from the *Home* page, click on the **Settings** drop-down menu at the top of the page and select **Wi-Fi**.

Wireless Mode: This is set to *Repeater* mode and cannot be changed.

Wi-Fi Network Name (SSID): Click **Scan** to use Site Survey to scan for available wireless networks within range of your DCH-M225. Select the network you want to use the DCH-M225 to extend. You can also type in the name (SSID) of the wireless network. The SSID is case-sensitive and must be entered exactly the same as your router or access point.

Security Mode: Select the security method that is being used by the wireless network that you have selected: **WEP**, **WPA-Personal**, or **None**. (For more information, refer to [“Wireless Security Options” on page 54.](#))

Password: If you select **WEP** or **WPA-Personal**, you will be required to enter the password or security key for the network you are attempting to join.

Save: Click **Save** to save the settings and return to the *Home* page.

Note: You can also use WPS to connect your wireless devices to the DCH-M225's extended network. For more information refer to [“Connecting to Wireless Clients Using WPS” on page 36.](#)

Extended Wi-Fi Settings

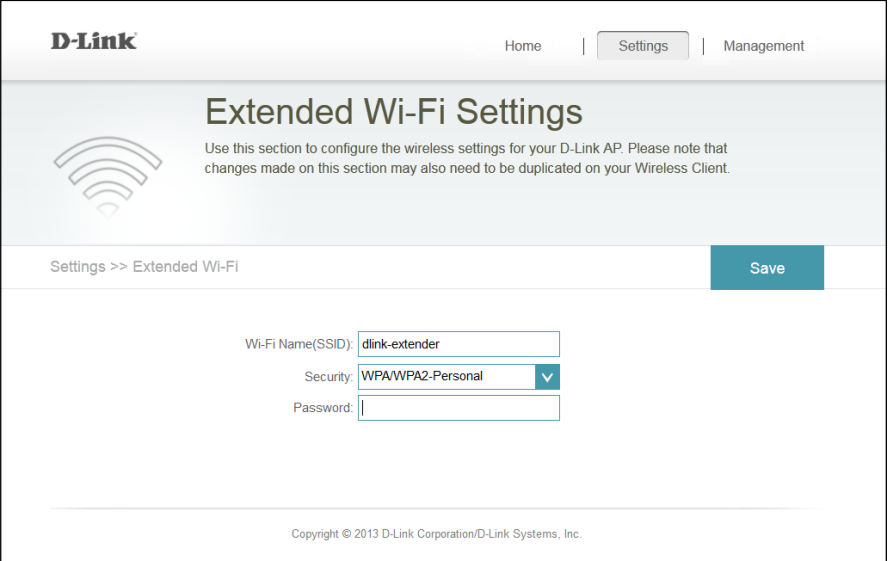
This page allows you configure the settings for the DCH-M225's extended wireless network. To access this page from the *Home* page, click on the **Settings** drop-down menu at the top of the page, and select **Extended Wi-Fi**.

Wi-Fi Name (SSID): This is the name of the DCH-M225's extended network. The DCH-M225 will rebroadcast the uplink router's Internet connection under this SSID. You can also choose to make the SSID and password for the extended network the same as the SSID and password for the uplink network. This means the DCH-M225 will extend the network that your router is currently broadcasting.

Security: Select the type of wireless security you wish to use for the extended network. Select **None**, **WEP**, or **WPA/WPA2 Personal** (recommended).

Password: Enter the password or network key that you wish to use for the extended network. You can also choose to make the password for the extended network the same as the password for the uplink network.

Save: Click **Save** to save the settings and return to the *Home* page.



The screenshot displays the D-Link web interface for Extended Wi-Fi Settings. At the top, there's a navigation bar with 'D-Link' logo, 'Home', 'Settings', and 'Management' links. Below this, the title 'Extended Wi-Fi Settings' is prominently displayed, accompanied by a Wi-Fi signal icon and a note: 'Use this section to configure the wireless settings for your D-Link AP. Please note that changes made on this section may also need to be duplicated on your Wireless Client.' A breadcrumb trail shows 'Settings >> Extended Wi-Fi', and a blue 'Save' button is located on the right. The main configuration area contains three fields: 'Wi-Fi Name(SSID):' with the value 'dlink-extender', 'Security:' with a dropdown menu set to 'WPA/WPA2-Personal', and 'Password:' with an empty text box. At the bottom, a copyright notice reads 'Copyright © 2013 D-Link Corporation/D-Link Systems, Inc.'

Audio Renderer

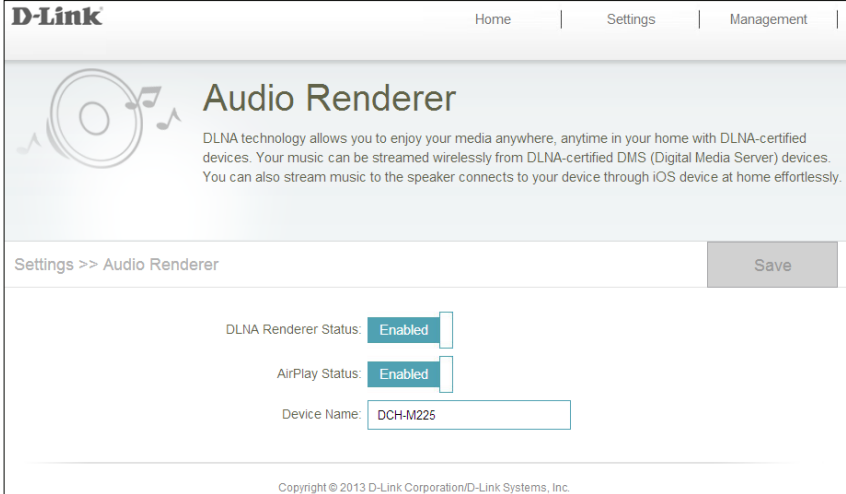
This page allows you to configure the settings for the DCH-M225's audio extending feature, so your music can be streamed wirelessly from a DLNA-certified* DMS device. To access this page from the *Home* page, click on the **Settings** drop-down menu at the top of the page, and select **Audio Renderer**.

DLNA Renderer Status: Click on the slider to enable or disable the DLNA Renderer feature. When this option is enabled, any DLNA compatible device will be able to find the DCH-M225 using the device name that is set in the **Device Name** field below.

AirPlay Status: Click on the slider to enable or disable the AirPlay feature. When this option is enabled, any AirPlay compatible device will be able to find the DCH-M225 using the device name that is set in the **Device Name** field below.

Device Name: You can enter a name for your device in this field. Other devices on your network that can stream audio through DLNA or AirPlay will be able to identify your DCH-M225 by this name.

Click **Save** to save the settings and return to the *Home* page.



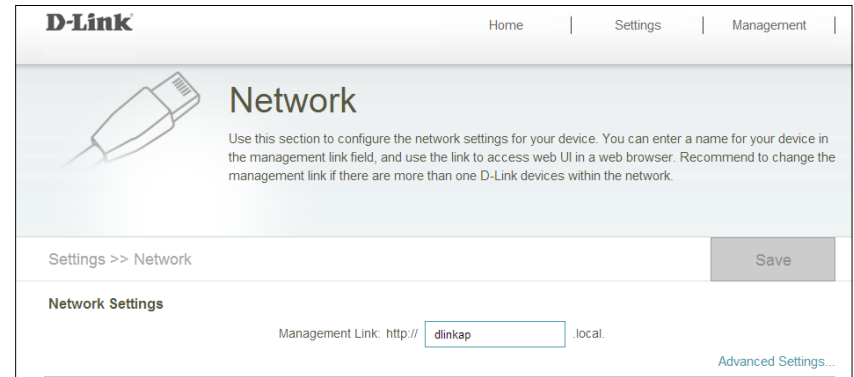
The screenshot shows the D-Link web interface for the Audio Renderer settings. At the top, there's a navigation bar with 'Home', 'Settings', and 'Management' links. The main heading is 'Audio Renderer' with a sub-explanation of DLNA technology. Below this, there's a breadcrumb 'Settings >> Audio Renderer' and a 'Save' button. The settings section includes three items: 'DLNA Renderer Status' with a slider set to 'Enabled', 'AirPlay Status' with a slider set to 'Enabled', and 'Device Name' with a text box containing 'DCH-M225'. A copyright notice at the bottom reads 'Copyright © 2013 D-Link Corporation/D-Link Systems, Inc.'

***Note:** DLNA certification ensures that a device can communicate with other DLNA certified products within a connected home.

Network Settings

This page allows you to configure the *Network Settings* for the DCH-M225. To access this page from the *Home* page, click on the **Settings** drop-down menu at the top of the page, and select **Network**.

Management Link: You can change the device name in the management link by editing the text in the text box. If you change this device name, you will need to enter **http://xxxx.local/** (where “xxxx” corresponds to the name of the device) in the address bar of your web browser in order to access the configuration utility.



D-Link Home | Settings | Management

Network

Use this section to configure the network settings for your device. You can enter a name for your device in the management link field, and use the link to access web UI in a web browser. Recommend to change the management link if there are more than one D-Link devices within the network.

Settings >> Network Save

Network Settings

Management Link: http:// .local. Advanced Settings...

Advanced Settings

The *Advanced Settings* section of the *Network Settings* page allows you to configure both *IPv4* and *IPv6* settings that will be used by the DCH-M225's extended network.

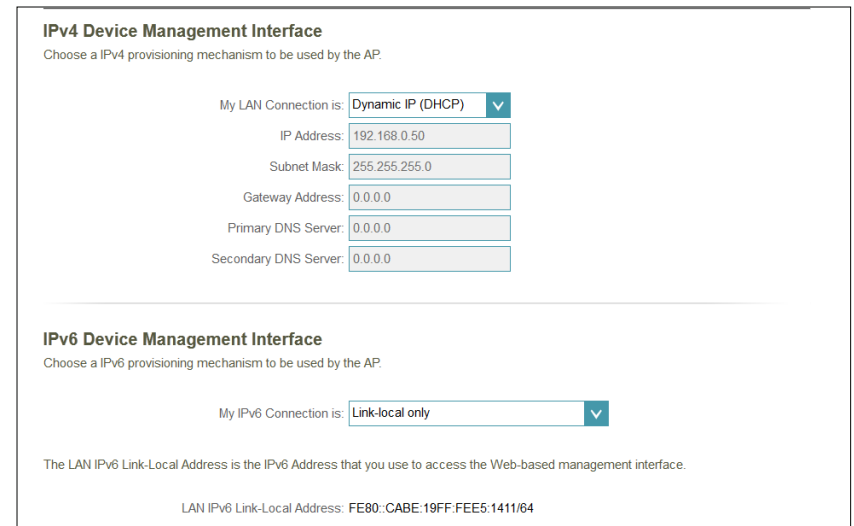
IPv4 Device Management Interface

My LAN Connection is: Select whether you want the IP to have a **Dynamic IP (DHCP)** or **Static IP** address. Select **Dynamic IP** to obtain the IP address information automatically from your ISP (Internet Service Provider.) If you choose *Dynamic IP*, the fields below will be greyed-out.

IP Address: Enter the **Static IP Address** you want to assign to the extended network AP. This address should be outside of the uplink router's DHCP address pool.

Subnet Mask: Enter the **Subnet Mask**.

Gateway Address: Enter the **Gateway Address**. (Usually this is the IP address of the uplink router.)



IPv4 Device Management Interface
Choose a IPv4 provisioning mechanism to be used by the AP.

My LAN Connection is: ▼

IP Address:

Subnet Mask:

Gateway Address:

Primary DNS Server:

Secondary DNS Server:

IPv6 Device Management Interface
Choose a IPv6 provisioning mechanism to be used by the AP.

My IPv6 Connection is: ▼

The LAN IPv6 Link-Local Address is the IPv6 Address that you use to access the Web-based management interface.

LAN IPv6 Link-Local Address: FE80::CABE:19FF:FEE5:1411/64

IPv4 Device Management Interface (con'd)

Primary DNS Server: Enter the address of the **Primary DNS Server**.

Secondary DNS Server: Enter the address of the **Secondary DNS Server**. This is optional but will provide backup if the primary server fails.

IPv4 Device Management Interface
Choose a IPv4 provisioning mechanism to be used by the AP.

My LAN Connection is: Dynamic IP (DHCP) ▼

IP Address:

Subnet Mask:

Gateway Address:

Primary DNS Server:

Secondary DNS Server:

IPv6 Device Management Interface

My IPv6 Connection is: Select **Autoconfiguration (SLAAC/DHCPv6)** to have the DCH-M225 automatically receive an IPv6 address from the uplink router.

Obtain DNS Server Address: You can select to **Obtain IPv6 DNS Servers automatically**, or you can click **Use the following IPv6 DNS Servers** and enter IPv6 DNS server addresses manually.

Primary DNS Server: If you selected the manual option above, enter the **Primary DNS Server** address.

Secondary DNS Server: If you selected the manual option above, enter the **Secondary DNS Server** address. This is optional but will provide backup if the Primary DNS server fails.

IPv6 Device Management Interface
Choose a IPv6 provisioning mechanism to be used by the AP.

My IPv6 Connection is: Autoconfiguration (SLAAC/DHCPv6) ▼

Obtain a DNS server address automatically or enter a specific DNS server address.

☐ Obtain IPv6 DNS Servers automatically

☒ Use the following IPv6 DNS Servers

Primary DNS Server:

Secondary DNS Server:

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IPv6 Device Management Interface (con'd)

My IPv6 Connection is: Select **Static IPv6** to manually assign an IP address to the DCH-M225.

IPv6 Address: Enter the **IPv6 Address** that you want to assign to the extended network AP. This address should be outside of the uplink router's DHCP address pool.

Subnet Prefix Length: Enter the length of the IPv6 subnet prefix.

Default Gateway: Enter the **Default Gateway**. (Usually this is the IP address of the uplink router.)

Primary DNS Server: Enter the **Primary DNS Server** address.

Secondary DNS Server: Enter the **Secondary DNS Server** address. This is optional but will provide backup if the primary server fails.

My IPv6 Connection is: Select **Link-local only** to set an IPv6 address for only the local network.

LAN IPv6 Link-Local Address: Displays the *LAN IPv6 Link-Local Address* of the DCH-M225.

IPv6 Device Management Interface

Choose a IPv6 provisioning mechanism to be used by the AP.

My IPv6 Connection is: Static IPv6

Enter the IPv6 address information that you would like to use to access the Web-based management interface.

IPv6 Address:

Subnet Prefix Length:

Default Gateway:

Primary DNS Server:

Secondary DNS Server:

IPv6 Device Management Interface

Choose a IPv6 provisioning mechanism to be used by the AP.

My IPv6 Connection is: Link-local only

The LAN IPv6 Link-Local Address is the IPv6 Address that you use to access the Web-based management interface.

LAN IPv6 Link-Local Address: FE80::CABE:19FF:FEE5:1411/64

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Maintenance

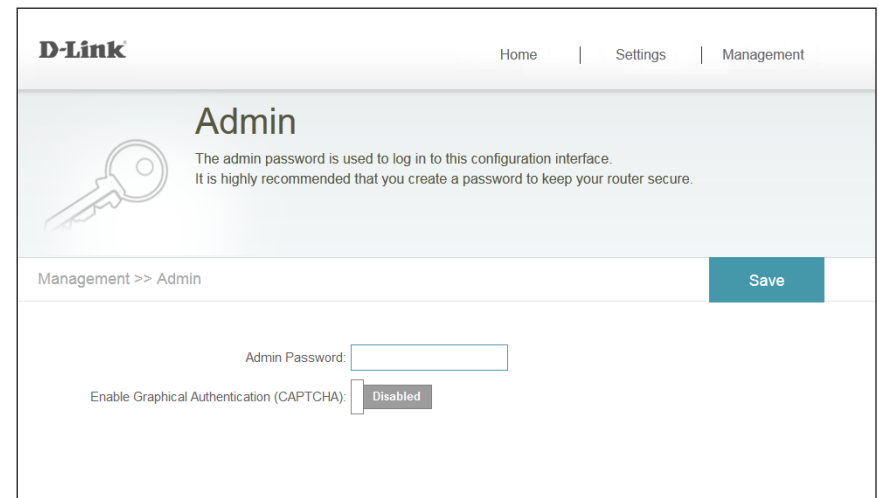
Admin

This page will allow you to set a new password for the administrator account used to configure the DCH-M225. You can also enable graphical authentication (CAPTCHA) for added security. To access this page from the *Home* page, click on the **Management** drop-down menu at the top of the page, and select **Admin**. Click **Save** at any time to save any changes you have made.

Admin Password: Enter an **Admin Password** for the administrator login.

Enable Graphical Authentication: Use the slider to **Enable Graphical Authentication**, or CAPTCHA. This provides an extra layer of security by requiring users to enter a code that is displayed on the screen. This can help prevent unauthorized users from gaining access to your wireless network.

Click **Save** to save your settings.



The screenshot shows the D-Link Admin configuration interface. At the top, there is a navigation bar with the D-Link logo and links for Home, Settings, and Management. The main heading is "Admin", accompanied by a key icon and a note: "The admin password is used to log in to this configuration interface. It is highly recommended that you create a password to keep your router secure." Below this, a breadcrumb trail reads "Management >> Admin". The configuration area includes a text input field for "Admin Password:" and a slider for "Enable Graphical Authentication (CAPTCHA):", which is currently set to "Disabled". A blue "Save" button is located in the top right corner of the configuration area.

System

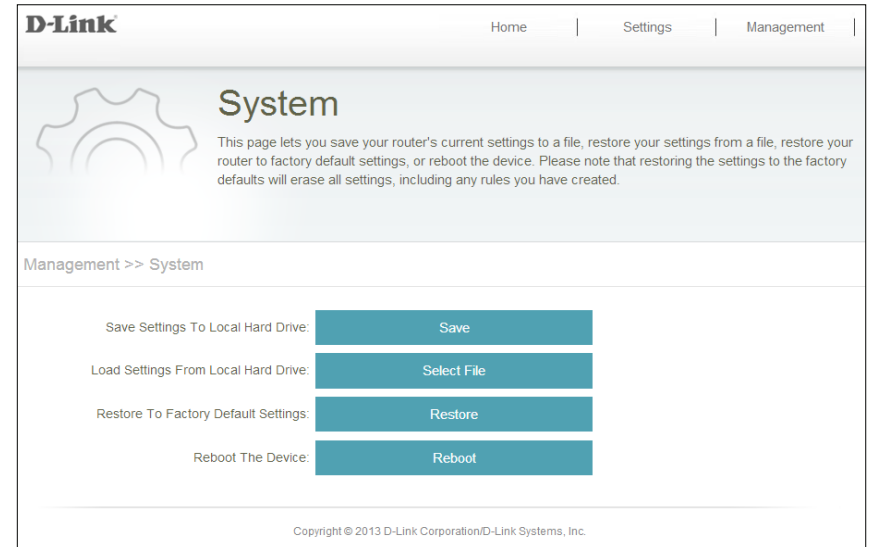
This page allows you to save or restore the settings for your DCH-M225. You can also reset or reboot your device. To access this page from the *Home* page, click on the **Management** drop-down menu at the top of the page, and select **System**.

Save Settings to Local Hard Drive: Click **Save** to save the current system settings to a file on the local hard drive of your computer. A file dialog will appear, allowing you to select a location and file name for the settings.

Load Settings from Local Hard Drive: Click **Select File** to locate and load previously saved system settings from a file on the local hard drive.

Restore to Factory Default Settings: Click **Restore** to reset the DCH-M225 to factory default settings. This will erase all currently stored settings.

Reboot the Device: Click **Reboot** to reboot the DCH-M225.



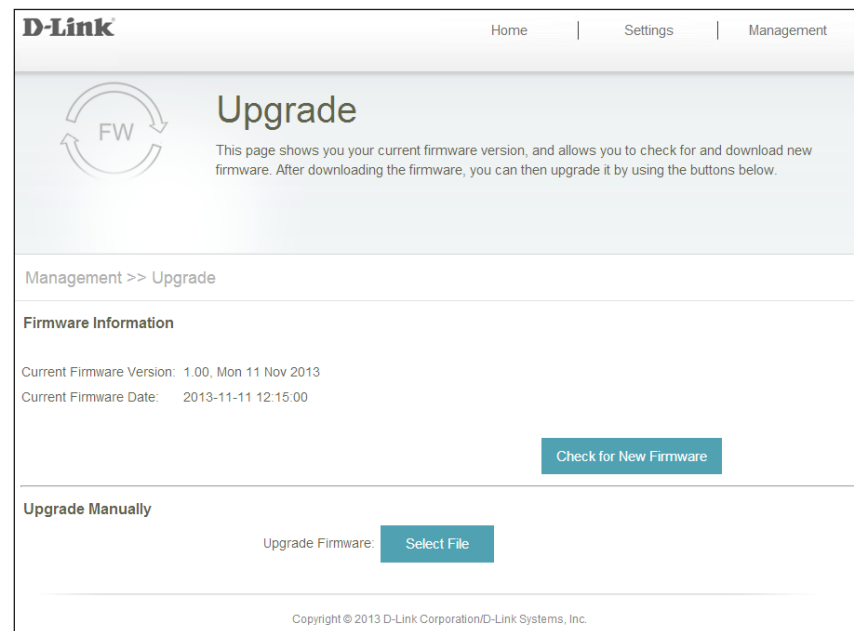
Upgrade Firmware

You can check for and upgrade the firmware. To access this page from the *Home* page, click on the **Management** drop-down menu at the top of the page and select **Upgrade**.

Firmware Information: This section displays the *Current Firmware Version*, as well as the date on which the current firmware version was released.

Check for New Firmware: Click **Check For New Firmware** to find out if there is updated firmware. If you discover there is new firmware available, you can download it to your computer.

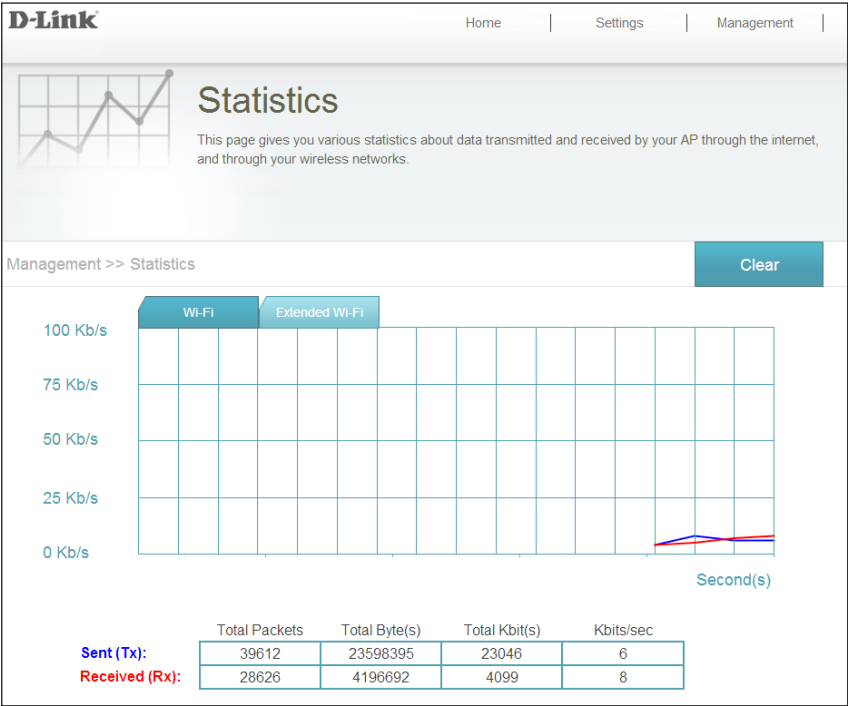
Upgrade Firmware: Click **Select File** to locate the firmware file on your local hard drive and perform a manual firmware upgrade.



Statistics

This page displays traffic statistics about data transmitted and received. To access this page from the *Home* page, click on the **Management** drop-down menu at the top of the page, and select **Statistics**.

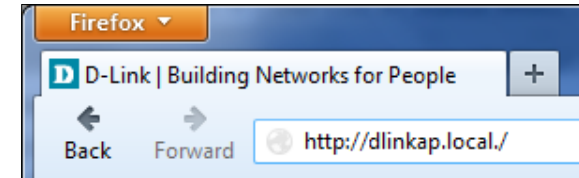
- Wi-Fi:** Click on the **Wi-Fi** tab to display the statistics for the connection between the DCH-M225 and the uplink router.
- Extended Wi-Fi:** Click on the **Extended Wi-Fi** tab to display the statistics for the **Wi-Fi** connection between the DCH-M225 and any connected clients.
- Clear:** Click the **Clear** button to reset the statistics.



Configuring WPA/WPA2 Personal

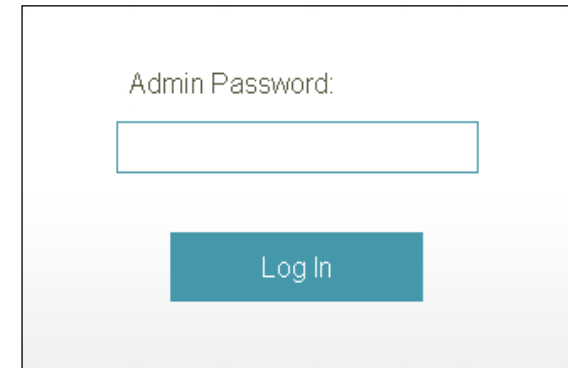
If you did not enable wireless security during initial setup, it is recommended that you do so using the web-based configuration utility. Establish wireless connectivity before enabling wireless security. For more information about security, refer to [“Wireless Security Options” on page 54](#). If you prefer WPS, proceed to [“Connecting to Wireless Clients Using WPS” on page 36](#).

1. Log into the web-based configuration by opening a web browser and entering **http://dlinkap.local/**.

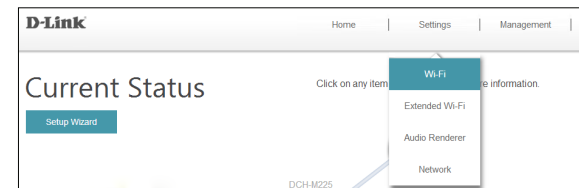


2. Simply click **Log In**. (The *Admin Password* is blank by default.)

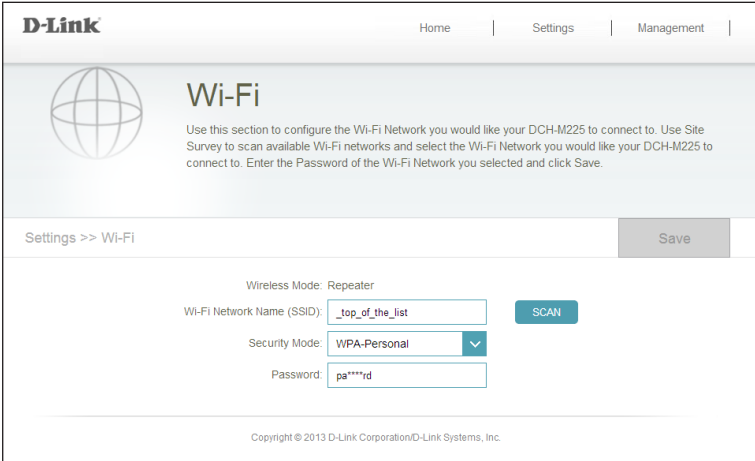
Note: *If you did not create a password, it should be left blank.*



3. The configuration interface will open to the *Home* page. Click on the **Settings** drop-down menu and select **Wi-Fi**. Then configure the Wi-Fi network you would like your DCH-M225 to connect to.



4. Click **Scan** to use the Site Survey to display available wireless networks within range of the DCH-M225. Select the one you want to secure.
5. Select the security method you would like to use for the selected wireless network: **WEP**, **WPA/WPA2**, or **None**. Click **Save** to save settings.



The screenshot shows the D-Link web interface for configuring the DCH-M225. At the top, there is a navigation bar with 'Home', 'Settings', and 'Management' links. The main header features the D-Link logo and a 'Wi-Fi' title. Below the title, a paragraph explains the purpose of the section: to configure the Wi-Fi network for the DCH-M225 to connect to, using the Site Survey to scan for available networks. A breadcrumb trail shows 'Settings >> Wi-Fi'. A 'Save' button is located in the top right corner of the configuration area. The configuration fields include 'Wireless Mode' set to 'Repeater', 'Wi-Fi Network Name (SSID)' with a dropdown menu showing '_top_of_the_list' and a 'SCAN' button, 'Security Mode' set to 'WPA-Personal' with a dropdown arrow, and 'Password' set to 'pa****d'. The footer contains the copyright notice: 'Copyright © 2013 D-Link Corporation/D-Link Systems, Inc.'

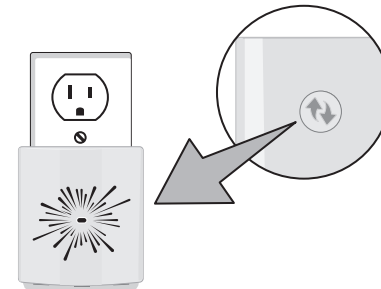
Connecting to a Wireless Network

Connecting to Wireless Clients Using WPS

The easiest and most secure way to connect your wireless devices to the DCH-M225 is WPS (Wi-Fi Protected Setup). Most wireless devices such as wireless adapters, media players, Blu-ray DVD players, wireless printers and cameras will have a WPS button (or a software utility with WPS) that you can press to connect to the DCH-M225.

Refer to the user manual for the wireless client you want to connect to make sure you understand how to enable WPS. Once you know, follow the steps below:

Step 1 - Press the WPS button on the DCH-M225 for about three seconds. The LED will start to blink green.



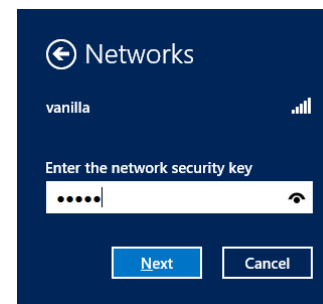
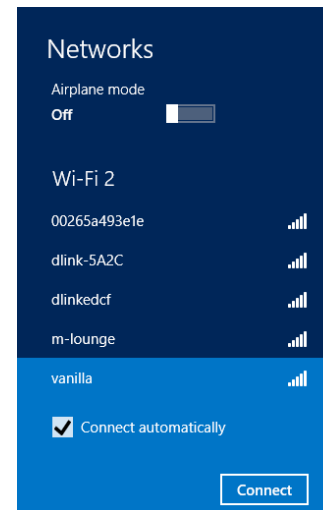
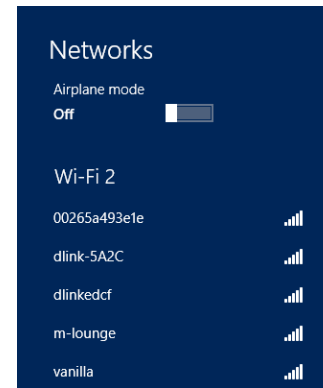
Step 2 - Within two minutes, press the WPS button on your wireless client (or launch the software utility and start the WPS process).



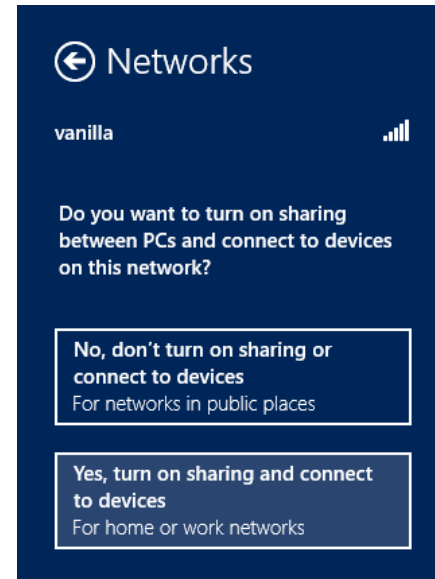
Step 3 - Allow up to two minutes to connect. Once the connection is successful the LED will be solid green and your wireless connection will be secured with WPA2.

Windows® 8

1. Click on the wireless computer icon in your system tray (lower-right corner next to the time).
2. A list of available wireless networks will appear.
3. Click the wireless network (SSID) you want to connect to and then click **Connect**.
4. If the network is secure/encrypted, enter the Wi-Fi password (security key) and click **Next**.



5. Click either to enable or disable file sharing.
6. You will now be connected to your wireless network.



If you get a good signal but cannot access the Internet, confirm the encryption by reviewing the profile or check the TCP/IP settings for your wireless adapter. Refer to the *Networking Basics* section in this manual for more information.

Windows® 7

It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Click on the wireless icon in your system tray (lower-right corner).



Wireless Icon

2. The utility will display any available wireless networks in your area.

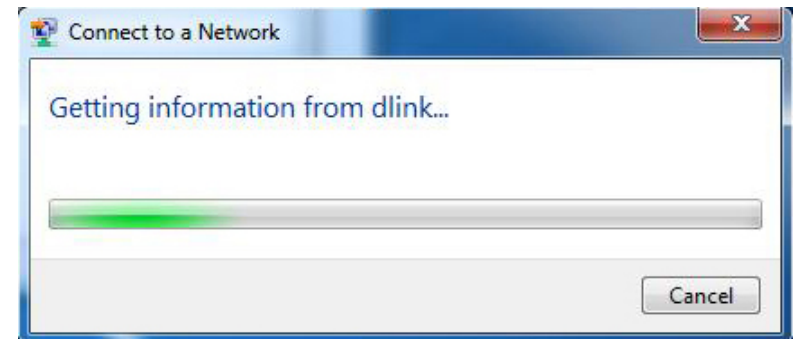


3. Highlight the wireless network (SSID) you would like to connect to and click the **Connect** button.

If you get a good signal but cannot access the Internet, check your TCP/IP settings for your wireless adapter. Refer to the Networking Basics section in this manual for more information.

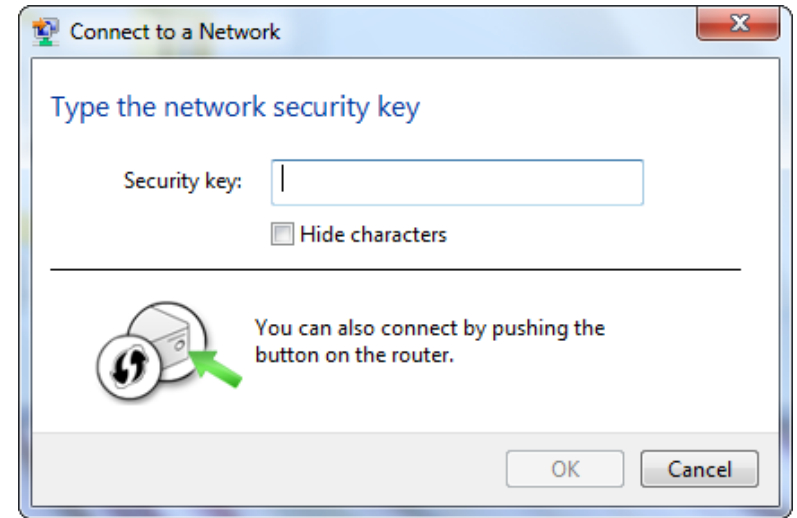


4. The following window appears while your computer tries to connect to the router.



5. Enter the same security key or passphrase that is on your router and click **Connect**. You can also connect by pushing the WPS button on the router.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



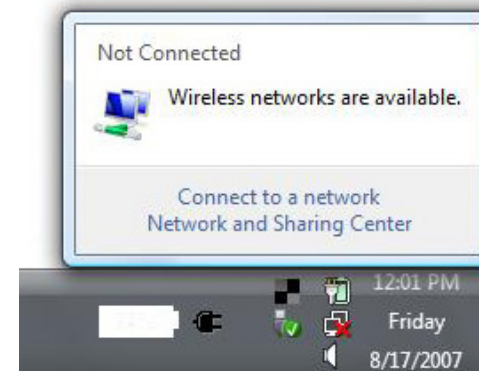
Windows Vista®

Windows Vista® users may use the built-in wireless utility. If you are using another company's utility, please refer to the user manual of your wireless adapter for help with connecting to a wireless network. Most utilities will have a "site survey" option similar to the Windows Vista® utility as seen below.

If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.

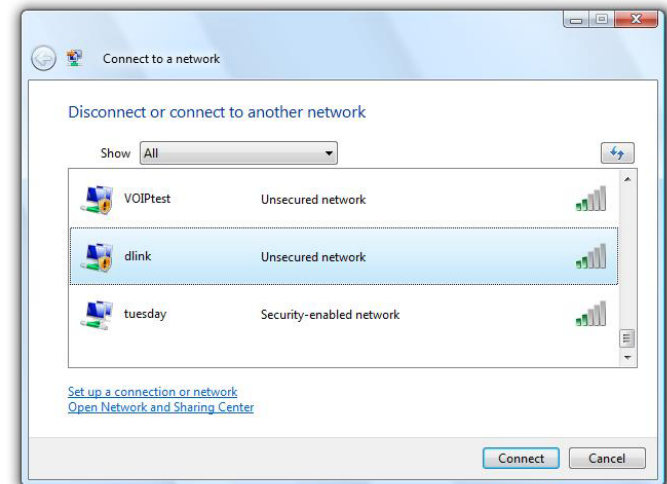
or

Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **Connect to a network**.



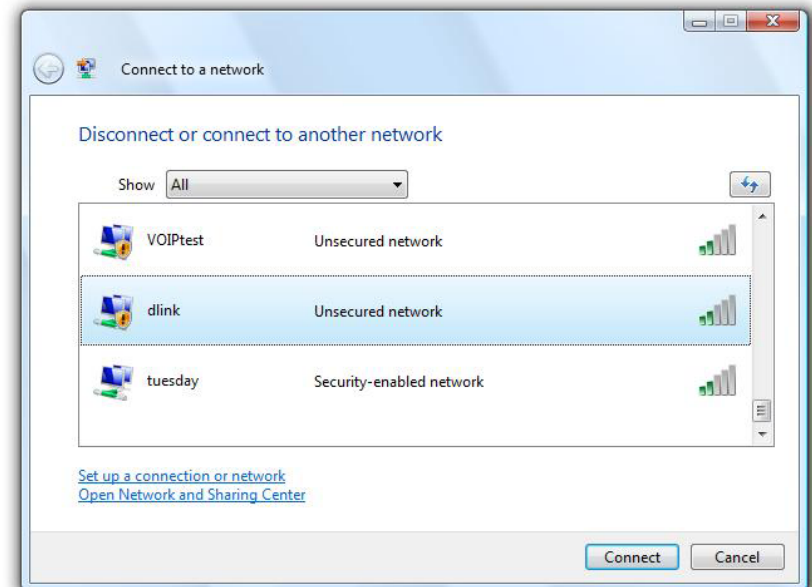
The utility will display any available wireless networks in your area. Click on a network (displayed using the SSID) and click the **Connect** button.

If you get a good signal but cannot access the Internet, check you TCP/IP settings for your wireless adapter. Refer to the **Networking Basics** section in this manual for more information.



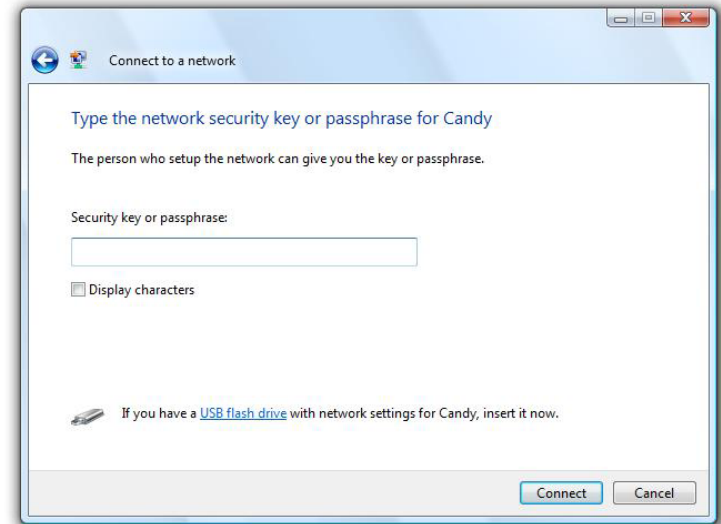
It is recommended to enable wireless security (WPA/WPA2) on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the security key or passphrase being used.

1. Open the Windows Vista® Wireless Utility by right-clicking on the wireless computer icon in your system tray (lower right corner of screen). Select **Connect to a network**.
2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



3. Enter the same security key or passphrase that is on your router and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the security settings are correct. The key or passphrase must be exactly the same as on the wireless router.



Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DCH-M225. Read the following descriptions if you are having problems.

1. Why can't I connect to my wireless router? Why does my wireless connection drop?

- Verify that the DCH-M225 is within range of your wireless router. Try plugging it into a location closer to the router and verify the LED is solid green.
- Note that when repeating a wireless signal from a router or access point, devices connected to the extender will not get the same speed/throughput as when connected directly to the router.

2. Why can't I access the web-based configuration utility?

When entering the IP address of the DCH-M225 (**192.168.0.50** for example), you are not connecting to a website, nor do you have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

- Make sure you have an updated Java-enabled web browser. We recommend the following:
 - Internet Explorer® 7 or higher
 - Firefox® 12 or higher
 - Chrome™ 20 or higher
 - Safari® 4 or higher
- Disable any Internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, and Norton Personal Firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

- Configure your Internet settings:
 - Go to **Start > Settings > Control Panel**. Double-click the **Internet Options** icon. From the **Security** tab, click the button to restore the settings to their defaults.
 - Click the **Connection** tab and set the dial-up option to **Never Dial a Connection**. Click the **LAN Settings** button. Make sure nothing is checked. Click **OK**.
 - Go to the **Advanced** tab and click the **Reset** button to restore these settings to their defaults. Click **OK** three times.
 - Close your web browser (if open) and open it.
- Access the *Web Management*. Open your web browser and enter the **IP address** of your DCH-M225 in the address bar. This should open the login page for your *Web Management*.
- If you still cannot access the configuration, unplug the device for 10 seconds and plug back in. Wait about 30 seconds and try accessing the configuration. If you have multiple computers, try connecting using a different c

3. What can I do if I forget my password?

If you forget your password, you must reset your DCH-M225. Unfortunately, this process will change all your settings back to the factory default settings.

To reset the DCH-M225, locate the reset button (hole) on the bottom of the unit. With the device plugged in, use a paper clip to hold the button down for 10 seconds. Release the button and the device will reboot. Wait about 30 seconds to access the DCH-M225. The default IP address is 192.168.0.50. When logging in, leave the password field empty.



Wireless Basics

D-Link wireless products are based on industry standards to provide easy-to-use and compatible high-speed wireless connectivity within your home, business or public access wireless networks. Strictly adhering to the IEEE standard, the D-Link wireless family of products will allow you to securely access the data you want, when and where you want it. You will be able to enjoy the freedom that wireless networking delivers.

A wireless local area network (WLAN) is a cellular computer network that transmits and receives data with radio signals instead of wires. Wireless LANs are used increasingly in both home and office environments, and public areas such as airports, coffee shops and universities. Innovative ways to utilize WLAN technology are helping people to work and communicate more efficiently. Increased mobility and the absence of cabling and other fixed infrastructure have proven to be beneficial for many users.

Wireless users can use the same applications they use on a wired network. Wireless adapter cards used on laptop and desktop systems support the same protocols as Ethernet adapter cards.

Under many circumstances, it may be desirable for mobile network devices to link to a conventional Ethernet LAN in order to use servers, printers or an Internet connection supplied through the wired LAN. A Wireless Router is a device used to provide this link.

What is Wireless?

Wireless or Wi-Fi technology is another way of connecting your computer to the network without using wires. Wi-Fi uses radio frequency to connect wirelessly, so you have the freedom to connect computers anywhere in your home or office network.

Why D-Link Wireless?

D-Link is the worldwide leader and award winning designer, developer, and manufacturer of networking products. D-Link delivers the performance you need at a price you can afford. D-Link has all the products you need to build your network.

How does wireless work?

Wireless works similar to how cordless phone work, through radio signals to transmit data from one point A to point B. But wireless technology has restrictions as to how you can access the network. You must be within the wireless network range area to be able to connect your computer. There are two different types of wireless networks Wireless Local Area Network (WLAN), and Wireless Personal Area Network (WPAN).

Wireless Local Area Network (WLAN)

In a wireless local area network, a device called an Access Point (AP) connects computers to the network. The access point has a small antenna attached to it, which allows it to transmit data back and forth over radio signals. With an indoor access point, the signal can travel up to 300 feet. With an outdoor access point the signal can reach out up to 30 miles to serve places like manufacturing plants, industrial locations, college and high school campuses, airports, golf courses, and many other outdoor venues.

Wireless Personal Area Network (WPAN)

Bluetooth is the industry standard wireless technology used for WPAN. Bluetooth devices in WPAN operate in a range up to 30 feet away.

Compared to WLAN the speed and wireless operation range are both less than WLAN, but in return it doesn't use nearly as much power which makes it ideal for personal devices, such as mobile phones, PDAs, headphones, laptops, speakers, and other devices that operate on batteries.

Who uses wireless?

Wireless technology has become so popular in recent years that almost everyone is using it, whether it's for home, office, business, D-Link has a wireless solution for it.

Home

- Gives everyone at home broadband access
- Surf the web, check email, instant message, etc.
- Gets rid of the cables around the house
- Simple and easy to use

Small Office and Home Office

- Stay on top of everything at home as you would at office
- Remotely access your office network from home
- Share Internet connection and printer with multiple computers
- No need to dedicate office space

Where is wireless used?

Wireless technology is expanding everywhere not just at home or office. People like the freedom of mobility and it's becoming so popular that more and more public facilities now provide wireless access to attract people. The wireless connection in public places is usually called "hotspots".

Using a D-Link Cardbus Adapter with your laptop, you can access the hotspot to connect to Internet from remote locations like: Airports, Hotels, Coffee Shops, Libraries, Restaurants, and Convention Centers.

Wireless network is easy to setup, but if you're installing it for the first time it could be quite a task not knowing where to start. That's why we've put together a few setup steps and tips to help you through the process of setting up a wireless network.

Tips

Here are a few things to keep in mind, when you install a wireless network.

Centralize your router or Access Point

Make sure you place the router/access point in a centralized location within your network for the best performance. Try to place the router/access point as high as possible in the room, so the signal gets dispersed throughout your home. If you have a two-story home, you may need a repeater to boost the signal to extend the range.

Eliminate Interference

Place home appliances such as cordless telephones, microwaves, and televisions as far away as possible from the router/access point. This would significantly reduce any interference that the appliances might cause since they operate on same frequency.

Security

Don't let you next-door neighbors or intruders connect to your wireless network. Secure your wireless network by turning on the WPA or WEP security feature on your router. Refer to product manual for detail information on how to set it up.

Networking Basics

Check your IP address

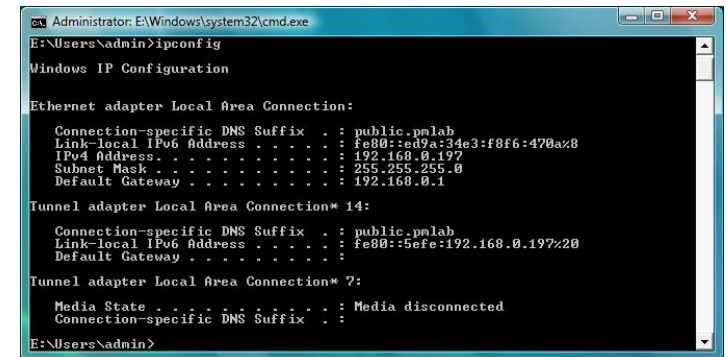
After you install your new D-Link wireless adapter and have established a wireless connection, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e., router) automatically. To verify your IP address, please follow the steps below.

Windows® 8 Users

- Press the **Windows key** and **R** together. Type **cmd** in the box and click **OK**.
- At the prompt, type **ipconfig** and press **Enter**.
- This will display the IP address, subnet mask, and default gateway of your adapter.

Windows® 7/Vista® Users

- Click **Start**, type **cmd** in the search box and then click **OK**.
- At the prompt, type **ipconfig** and press **Enter**.
- This will display the IP address, subnet mask, and default gateway of your adapter.



```
Administrator: E:\Windows\system32\cmd.exe
E:\Users\admin>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : public.pmlab
    Link-local IPv6 Address . . . . . : fe80::ed9a:34e3:f8f6:470a%8
    IPv4 Address. . . . . : 192.168.0.197
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.0.1

Tunnel adapter Local Area Connection* 14:

    Connection-specific DNS Suffix  . : public.pmlab
    Link-local IPv6 Address . . . . . : fe80::5efe:192.168.0.197%20
    Default Gateway . . . . . :

Tunnel adapter Local Area Connection* 7:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :

E:\Users\admin>
```

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.

Statically Assign an IP Address

If you are not using a DHCP capable gateway/router, or you need to assign a static IP address, please follow the steps below:

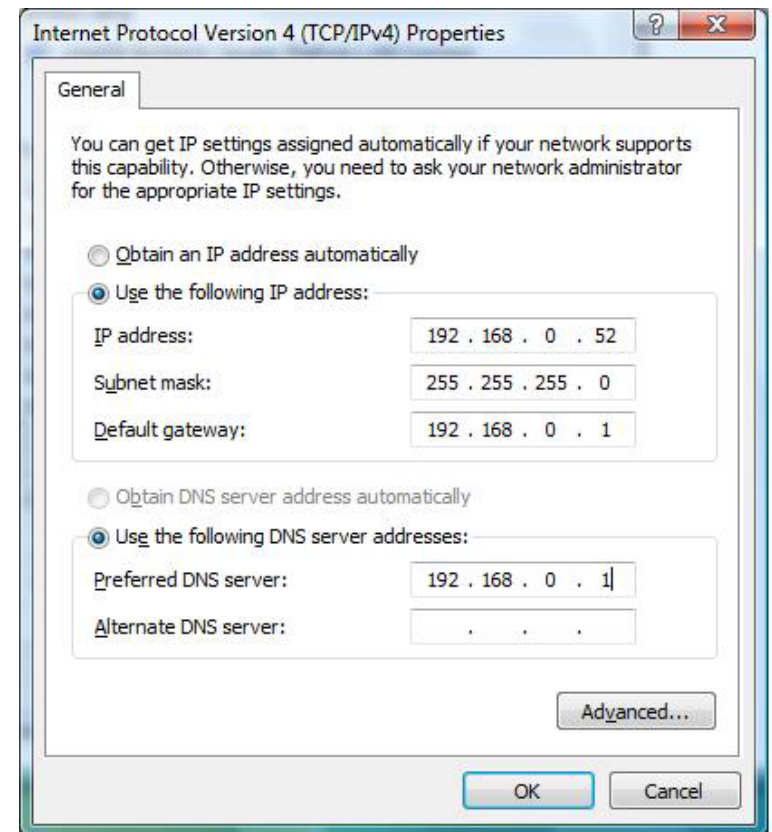
Windows® 8 Users

- Press the **Windows** key and then type **IP**. Click **Settings** on the right side and then click **View Network Connections**.
- Right-click on the adapter which represents your D-Link wireless network adapter.

- Highlight **Internet Protocol Version 4 (TCP /IPv4)** and click **Properties**.
- Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or LAN IP address on your router or network.

Example: If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network.

- Set **Default Gateway** the same as the LAN IP address of your router or gateway.
- Set **Primary DNS** the same as the LAN IP address of your router or gateway.
- The **Secondary DNS** is optional (you may enter a DNS server from your ISP).
- Click **OK** to save your settings.



Windows® 7/ Vista® Users

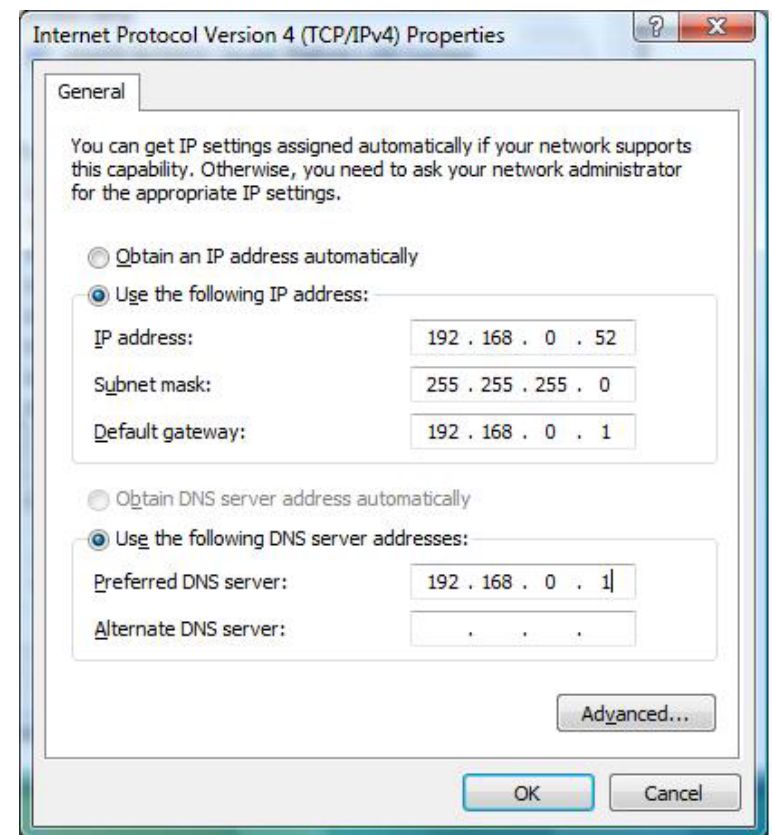
- Click on **Start > Control Panel** (make sure you are in Classic View). Double-click on the **Network and Sharing Center** icon. If you are using Windows Vista, click on **Manage network connections** along the left panel in the window. For Windows® 7, click on **Change adapter settings**.
- Right-click on the **Local Area Connection** which represents your D-Link wireless network adapter which will be connected to your network.

- Highlight **Internet Protocol Version 4 (TCP /IPv4)** and click **Properties**.

- Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or LAN IP address on your router or network.

Example: If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network.

- Set **Default Gateway** the same as the LAN IP address of your router or gateway.
- Set **Primary DNS** the same as the LAN IP address of your router or gateway.
- The **Secondary DNS** is optional (you may enter a DNS server from your ISP).
- Click **OK** to save your settings.



Wireless Security Options

What is the best way to secure your wireless computer network? There are several security protocols with various versions from which to choose. Depending on the wireless device, you may have to select from different levels of security. The description of security protocols, encryption and authentication that follows is intended to help you better understand your choices.

Security Protocols

WPA (Wi-Fi Protected Access) and **WPA2** (Wi-Fi Protected Access II) are two security protocols that were developed by the Wi-Fi Alliance (WFA) to replace the less-secure **WEP** (Wired Equivalent Privacy). The WFA is a trade association that certifies Wi-Fi® products that are compliant with standards of interoperability. IEEE 802.11 is the set of specifications for implementing WLAN (Wireless Local Area Network) computer communication within the 2.4 to 5GHz frequency bands. WLAN typically provides a connection between wireless devices to the Internet using an AP (access point).

WPA was originally referred to as the draft IEEE 802.11i standard, since it became available first, and was intended as an intermediate solution pending the availability of a full IEEE 802.11i standard. **WPA2** was known as IEEE 802.11i-2004, the year it first became available. Wi-Fi devices that have been certified since 2006 generally support both **WPA** and **WPA2**.

WPS (Wi-Fi Protected Setup™) provides the easiest way to establish a secure wireless network for home or small office (SOHO) environments. Introduced in 2007, **WPS** was created by WFA so that users who might otherwise be intimidated by the available security options could set up a secure network, and later add new devices, with a simple automated process. PBC (Push Button Configuration) requires just the push of a button. Today most wireless devices, from routers to wireless printers and cameras, have a **WPS** button. **WPS** enables WPA2 security protocol.

Encryption

WPA typically provides data encryption using **TKIP** (Temporal Key Integrity Protocol), which dynamically generates a new 128-bit key for each data packet that is transmitted between networks. WPA also has an integrity checking feature, designed to prevent a hacker from altering and re-sending the data packets.

WPA2 uses **CCMP**, for Counter Cipher Mode with Block Chaining Message Authentication Code Protocol, which uses a higher standard known as **AES** (Advanced Encryption Standard). Therefore **CCMP** provides stronger security than **TKIP**. It was designed to provide data confidentiality, user authentication, and access control. WPS also uses a form of **AES**.

Authentication

With both WPA and WPA2, there are two types of authentication. For home or small office environments, **WPA-Personal** and **WPA2-Personal** are widely used. Enterprise networks for business use **WPA-Enterprise** and **WPA2-Enterprise**.

WPA-Personal, also called **WPA-PSK** (for Pre-shared key) / **WPA2-Personal** or **WPA2-PSK**:

Was designed for home and small office networks, and does not require an authentication server. Instead, each network device authenticates with the AP (access point) using the same key generated from an alpha-numeric password or passphrase. The password must be between 8-64 characters, and should not be a commonly known phrase.

WPA-Enterprise, also known as **WPA-802.1X** / **WPA2-Enterprise** or **WPA2-802.1X**:

Was designed for enterprise networks, and requires a RADIUS authentication server. The server uses a set of protocols to implement secure access for devices attempting to communicate with the network.

Although this is a more complicated setup, it provides the best security through **EAP**, for Extensible Authentication Protocol. **EAP** is actually a general framework, or architecture, for creation of keying material for message authentication. For example, when **EAP** is implemented in an 802.1X-enabled Network Access Server (NAS) device, **EAP** methods are used to generate a secure private key that can be used for wireless encryption. This will ensure that only authorized network devices can access the network.

The WPS protocol uses **EAP** message exchanges for authentication. There are two methods:

1. Push-Button-Method means the user simply pushes a button on the access point or router, and within a minute or two pushes a button on the new wireless client device, in order to connect it to the wireless network.
2. The PIN method uses a Personal Identification Number that must be read from either a sticker, wireless configuration card, or the display on the wireless device. Support for this mode is mandatory for access points. However, there is some concern that the messages sent between the AP and the wireless client when attempting to validate the PIN could make the network vulnerable to attack. Most companies have fixed this issue with updated firmware.

Technical Specifications

Standards

- IEEE 802.11n
- IEEE 802.11g

Wireless Frequency Range

- 2.4 GHz to 2.4835 GHz

Antennas

- Two Internal Antennas

Security

- Wi-Fi Protected Access (WPA/WPA2)
- WPS™ (PBC)

Advanced Features

- QRS (Quick Router Setup) app for iOS and Android

Device Management

- Web UI

Diagnostic LEDs

- Status/WPS

Operating Temperature

- 32 to 104 °F (0 to 40 °C)

Operating Humidity

- 0% to 90% non-condensing

Power Input

- AC 110-240V

Maximum Power Consumption

- 5W

Certifications

- Wi-Fi Certified
- FCC
- CE
- IC
- C-Tick
- CSA

Dimensions

- 2.13" x 1.65" x 2.15" (54 x 42 x 54.5mm)

Weight

- 0.18 lb (81.2 g)

Warranty

- 1-Year Limited Warranty

1 Maximum wireless signal rate derived from IEEE Standard 802.11g and 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental factors will adversely affect wireless signal range.

2 Frequency Range varies depending on country's regulation

Contacting Technical Support

U.S. and Canadian customers can contact D-Link technical support through our web site or by phone.

Before you contact technical support, please have the following ready:

- Model number of the product (e.g. DCH-M225)
- Hardware Revision (located on the label on the device (e.g. rev A1))
- Serial Number (s/n number located on the label on the device).

You can find software updates and user documentation on the D-Link website as well as frequently asked questions and answers to technical issues.

For customers within the United States:

Phone Support:

(877) 453-5465

Internet Support:

<http://support.dlink.com>

For customers within Canada:

Phone Support:

(800) 361-5265

Internet Support:

<http://support.dlink.ca>

Warranty

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. ("D-Link") provides this Limited Warranty:

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and
- Only for products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO.

Limited Warranty:

D-Link warrants that the hardware portion of the D-Link product described below ("Hardware") will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below ("Warranty Period"), except as otherwise stated herein.

- Hardware (excluding power supplies and fans): One (1) year
- Power supplies and fans: One (1) year
- Spare parts and spare kits: Ninety (90) days

The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

Limited Software Warranty:

D-Link warrants that the software portion of the product ("Software") will substantially conform to D-Link's then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days ("Software Warranty Period"), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link's functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by D-Link in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

Non-Applicability of Warranty:

The Limited Warranty provided hereunder for Hardware and Software portions of D-Link's products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold "As-Is" without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

Submitting A Claim (USA):

The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at <https://support.dlink.com>, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization ("RMA") number by completing the RMA form and entering the assigned Case ID Number at <http://rma.dlink.com/>.

- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Please refer to shipping and packaging instructions located online at <http://rma.dlink.com/>.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to **D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708**. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer.

D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

Submitting A Claim (Canada):

The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- Customers need to provide their receipt (proof of purchase) even if the product is registered. Without a receipt, no warranty service will be done. The registration is not considered a proof of purchase.
- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-800-361-5265, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization ("RMA") number by completing the RMA form and entering the assigned Case ID Number at <https://rma.dlink.ca/>.
- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories.

- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will be rejected by D-Link. Products shall be fully insured by the customer and shipped to D-Link Networks, Inc., 2525 Meadowvale Boulevard Mississauga, Ontario, L5N 5S2 Canada. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via Purolator Canada or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in Canada, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.
- RMA phone number: 1-800-361-5265 Hours of Operation: Monday-Friday, 9:00AM – 9:00PM EST

What Is Not Covered:

The Limited Warranty provided herein by D-Link does not cover:

Products that, in D-Link's judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; and Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product.

While necessary maintenance or repairs on your Product can be performed by any company, we recommend that you use only an Authorized D-Link Service Office. Improper or incorrectly performed maintenance or repair voids this Limited Warranty.

Disclaimer of Other Warranties:

EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED "AS-IS" WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.

IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO THE DURATION OF THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

Limitation of Liability:

TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK'S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NONCONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

Governing Law:

This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This Limited Warranty provides specific legal rights and you may also have other rights which vary from state to state.

Trademarks:

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Copyright Statement:

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CE Mark Warning:

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC Statement:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

IMPORTANT NOTICE:**FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.to match the intended destination. The firmware setting is not accessible by the end user.

Industry Canada statement:

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Declaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Registration

Register your product online at registration.dlink.com



Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

Version 1.0
June 11, 2014